

Date: Thu, 3 Mar 94 04:31:16 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #46
To: Ham-Space

Ham-Space Digest Thu, 3 Mar 94 Volume 94 : Issue 46

Today's Topics:

COMMON SATELLITE FREQUENCIES LISTINGS
Satellite progs on World (2 msgs)
SATNODE ???
Space Shuttle Radio Frequency List

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Mar 94 16:34:23 GMT
From: news-mail-gateway@ucsd.edu
Subject: COMMON SATELLITE FREQUENCIES LISTINGS
To: ham-space@ucsd.edu

COMMON SATELLITE FREQUENCIES LISTINGS (MAY 1993 UPDATE)

00965:TRANSIT 5BN 5	:136.650	NAVIGATION	
02608:ATS-1	:135.555,135.575,135.600	COMMUNICATION	
:ATS-1	:135.625,135.645,137.350	COMMUNICATION	
03029:ATS-3	:137.37,137.350	COMMUNICATION	
04320:A0-5	:29.450,144.05	AMATEUR	*1
06236:A0-6	:29.450	AMATEUR	*1
06909:OSCAR 20	:149.9875,399.9680	NAVIGATION	
07530:A0-7	:29.502,145.975,435.100	AMATEUR	*1
08366:GOES 1	:136.380	WEATHER	
10061:GOES 2	:136.380	WEATHER	
10637:IUE	:136.860	EXPLORER	
10703:A0-8	:29.402,435.095	AMATEUR	*1

10953:GEOS 3	:136.380	WEATHER	
11054:GPS-03	:1227.600	NAVIGATION	
12458:NOVA I	:149.9875,399.9680	NAVIGATION	
12544:METEOSAT 2	:137.078	WEATHER	
12553:NOAA 7	:137.620	WEATHER	*1
13010:MARECS-A	:137.170	GEOSTATIONARY	
13362:NOVA III	:149.9875,399.9680	NAVIGATION	
13367:LANDSAT 4	:137.860	EARTH RESOURCES	
13386:MARECS-B2	:137.170	GEOSTATIONARY	
13923:NOAA 8	:137.500	WEATHER	*1
14129:A0-10	:145.810,145.989,436.020	AMATEUR	
:A0-10	:436.040	AMATEUR	
14189:GPS-08	:1227.600	NAVIGATION	
14372:COSMOS 1500	:137.400,466.500	OCEANOGRAPHIC	
14781:U0-11	:145.825	AMATEUR	
15039:GPS-09	:1227.600	NAVIGATION	
15271:GPS-10	:1227.600	NAVIGATION	
15427:NOAA 9	:137.620,137.770	WEATHER	
15936:OSCAR 30	:149.9875,399.9680	NAVIGATION	
16129:GPS-11	:1227.600	NAVIGATION	
16609:MIR	:121.125,121.750,130.165	SPACE STATION	
:MIR	:139.205,143.625,145.500	SPACE STATION	
:MIR	:145.550,145.900,231.000	SPACE STATION	
:MIR	:233.000,247.000,249.000	SPACE STATION	
:MIR	:417.000,463.000	SPACE STATION	
16969:NOAA 10	:137.500,136.770	WEATHER	
17066:COSMOS 1791	:150.000,400.00	NAVIGATION	
17070:POLAR BEAR	:149.9875,399.9680	NAVIGATION	
18122:RS 10/11	:29.357,29.403,145.857	AMATEUR	
:COSMOS 1861	:145.903,29.403,29.453	AMATEUR	
:COSMOS 1861	:145.907,145.953	AMATEUR	
18312:METEOR 2-16	:137.400	WEATHER	
18361:OSCAR 27	:149.9875,399.9680	NAVIGATION	
18362:OSCAR 29	:149.9875,399.9680	NAVIGATION	
18820:METEOR 2-17	:137.300	WEATHER	
19070:OSCAR 23	:149.9875,399.9680	NAVIGATION	
19071:OSCAR 32	:149.9875,399.9680	NAVIGATION	
19215:METEOSAT 3	:137.080	WEATHER	
19216:A0-13	:145.8125,145.975,435.650	AMATEUR	
:A0-13	:435.675,145.950,145.955	AMATEUR	
19223:NOVA II	:149.9875,399.9680	NAVIGATION	
19336:METEOR 3-2	:137.850	WEATHER	
19419:OSCAR 25	:149.9875,399.9680	NAVIGATION	
19420:OSCAR 31	:149.9875,399.9680	NAGIGATION	
19531:NOAA 11	:137.620,137.770	WEATHER	
19802:GPS BII-01	:1227.600	NAVIGATION	
19826:COSMOS 2004	:149.940,399.840	NAVIGATION	*1
19851:METEOR 2-18	:137.300	WEATHER	

20045: COSMOS 2006	:149.970,399.920	NAVIGATION	*1
20061: GPS BII-02	:1227.600	NAVIGATION	
20185: GPS BII-03	:1227.600	NAVIGATION	
20302: GPS BII-04	:1227.600	NAVIGATION	
20305: METEOR 3-3	:137.850	WEATHER	
20361: GPS BII-05	:1227.600	NAVIGATION	
20437: UO-14	:435.070	AMATEUR	
20438: UO-15	:435.120	AMATEUR	
20439: PO-16 PACSAT	:437.025,437.050	AMATEUR	
20440: DO-17 DOVE	:145.825	AMATEUR	
20441: WO-18 WEBERSAT	:437.075,437.105	AMATEUR	
20442: LO-19 LUSAT	:437.155,437.125	AMATEUR	
20452: GPS BII-06	:1227.600	NAVIGATION	
20480: FO-20	:435.910,435.795	AMATEUR	
20508: NADEZHDA 2	:150.000,400.00	NAVIGATION	
20577: COSMOS 2074	:149.910,399.760	NAVIGATION	*1
20670: METEOR 2-19	:137.850	WEATHER	
20724: GPS BII-08	:1227.600	NAVIGATION	
20788: FENGYUN 1B	:137.795	WEATHER	
20826: METEOR 2-20	:137.850	WETHER	
20830: GPS BII-09	:1227.600	NAVIGATION	
20959: GPS BII-10	:1227.600	NAVIGATION	
21087: AO-21	:145.985,145.825,145.950	AMATEUR	
: AO-21	:145.8375,145.800	AMATEUR	
21089: COSMOS 2123	:150.000,400.00	NAVIGATION	
21089: RS 12/13	:29.408,29.454,145.915	AMATEUR	
: RS 13/13	:145.960,29.458,29.504	AMATEUR	
: RS 12/13	:145.865,145.910	AMATEUR	
21130: COSMOS 2135	:149.970,399.920	NAVIGATION	*1
21152: NADEZHDA 3	:150.000	NAVIGATION	
21230: COSMOS 2142	:150.030,400.080	NAVIGATION	
21232: METEOR 3-4	:137.300	WEATHER	
21263: NOAA 12	:137.500,136.770	WEATHER	
21552: GPS BII-11	:1227.600	NAVIGATION	
21575: UO-22	:435.120	AMATEUR	
21578: SARA	:145.955	???????	
21655: METEOR 3-5	:137.850	WEATHER	
21666: COSMOS 2154	:149.940,399.840	NAVIGATION	*1
21796: COSMOS 2173	:149.970,399.920	NAVIGATION	
21798: DMSP B5D2-6	:137.500,136.770	WEATHER (MILITARY)	
21875: COSMOS 2180	:149.940,399.840	NAVIGATION	
21890: GPS BII-12	:1227.6	NAVIGATION	
21902: COSMOS 2181	:150.000,400.000	NAVIGATION	
21930: GPS BII-13	:1227.6	NAVIGATION	
21937: COSMOS 2184	:149.910,399.760	NAVIGATION	
21975: COSMOS 2190	:149.940,399.840	NAVIGATION	
21980: COSMOS 2191	:150.000,400.000	NAVIGATION	
22006: COSMOS 2195	:149.970,399.920	NAVIGATION	

22014:GPS BII-14	:1227.6	NAVIGATION
22077:KITSAT A	:435.175	AMATEUR
22078:SS0/T	:137-139	??
22108:GPS BII-15	:1227.6	NAVIGATION
22161:FREJA	:400.550	AURORA RESEARCH
22207:COSMOS 2218	:149.940,399.840	NAVIGATION
22231:GPS BII-16	:1227.6	NAVIGATION
22275:GPS BII-17	:1227.6	NAVIGATION
22319:SOYUZ TM-16	:121.125,121.750,130.167	MANNED FLIGHT
:SOYUS TM-16	:139.208,143.625,231.000	MANNED FLIGHT
:SOYUS TM-16	:233.000,247.000,249.000	MANNED FLIGHT
:SOYUS TM-16	:417.000,463.000	MANNED FLIGHT
22446:GPS BII-18	:1227.6	NAVIGATION
22487:COSMOS 2233	:150.030,400.080	NAVIGATION
:ARSENE	:145.975,2446.540	AMATEUR
22490:SCD-1	:401.620,401.650	WEATHER
22530:PROGRESS TM-16	:166.000,165.000,922.755	SUPPLY SHIP

*1 No longer transmitting. Kept for reference.

NOTE: Here are some FLTSATCOM Frequencies reported to be in use. These frequencies are either DATA or VOICE or both.

244.0950	261.6500	262.2500	269.0700
248.9000	261.6750	262.3000	269.4750
249.5500	261.7000	262.4750	269.5500
250.4500	250.5500	259.7000	261.9000
262.5500	269.8000	261.4500	261.9500
262.9500	269.9500	261.4750	262.1000
263.6250	288.0000	261.5250	262.2250
264.9000	295.0750	261.6000	

-END-

Date: Tue, 1 Mar 1994 20:37:07 +0000
 From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!pipex!uknet!demon!
 isis.demon.co.uk!ian@network.ucsd.edu
 Subject: Satellite progs on World
 To: ham-space@ucsd.edu

In article <wylzCLLyFJ.IpF@netcom.com> wylz@netcom.com "Scott Ehrlich" writes:

>
 >I have now placed some satellite tracking programs on World:
 >
 >- stsplus.zip
 >

```
>- stsortbit.zip
>
>- traksat {trak300a.zip & trak300b.zip} (latest version of traksat)
>
>
>They are available via anonymous FTP via
>
>ftp ftp.std.com:/pub/hamradio/pc/satellite
>
>
>If you have any problems, questions, or comments, please e-mail them to me.
>
>I tried very hard to search for stsplus through many archie searches, and
>only found one site which carried it. I hope that by making it available
>on World it will be easier to obtain.
```

Ah, but which version of STSPLUS is it ? The damned thing gets updated two or three times a year, or so it seems. The version numbering is pretty unusual as well. For what it's worth, the latest I've seen is 9353, which if I recall the method makes it the last week in '93. 9333 was the last *major* upgrade.

Regards

Ian.

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| Ian Smith           | "The Moving Finger writes;
| ian@isis.demon.co.uk | and, having writ, Moves on."
```

Date: Wed, 2 Mar 1994 12:03:37 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!pipex!bbc!ant!
boyer@network.ucsd.edu
Subject: Satellite progs on World
To: ham-space@ucsd.edu

John Boyer (boyer@rd.eng.bbc.co.uk) wrote:
: Scott Ehrlich (wy1z@netcom.com) wrote:

: : I have now placed some satellite tracking programs on World:

: : - stsplus.zip

: : - stsortbit.zip

: : - traksat {trak300a.zip & trak300b.zip} (latest version of traksat)

: : They are available via anonymous FTP via
: : ftp ftp.std.com:/pub/hamradio/pc/satellite
: Just a short comment. I have traksat and it is really great and dead easy
: to use.
: John B
: John.boyer@rd.eng.bbc.co.uk

Sorry. Did I say traksat? I actually meant Satra version 1.0. That's the
problem with all these sat tracking progs what to call them.
I have played with tracksat 3 and I found it hard to drive.

John B
John.boyer@rd.eng.bbc.co.uk

Date: Tue, 1 Mar 1994 16:25:54 GMT
From: ihnp4.ucsd.edu!swrinde!gatech!howland.reston.ans.net!pipex!uknet!nessie!
jh.mcc.ac.uk!John@network.ucsd.edu
Subject: SATNODE ???
To: ham-space@ucsd.edu

I have been asked to look out for a program called SATNODE for the PC, which
acts as a gateway to the packet satellites and allows unattended operation
with automatic forwarding etc...

John, G1YYH

J.Heaton@MCC.ac.uk

Date: 2 Mar 94 16:34:26 GMT
From: news-mail-gateway@ucsd.edu
Subject: Space Shuttle Radio Frequency List
To: ham-space@ucsd.edu

Space Shuttle Radio Frequency List
By Rich Weinkauf, Farmington, MI
STSFRQ03.TXT

A Space Shuttle mission requires the coordination of thousands of individuals;
both on the planet, and off. This coordination is directed largely by radio

communications, both voice and digital; and supplies the communications enthusiast with several opportunities for listening. The following list includes radio voice communication frequencies reported to be in use during a typical Space Shuttle mission. This list has been gleaned from many sources, including personal communications, messages on Prodigy, Amateur Radio Bulletin Boards, Space and Astronomy Bulletin Boards, and the NASA Spacelink BBS. All of it is subject to change without notice, and reception is dependent on your location and the propagation conditions.

I can be reached for additions, deletions, and corrections to this list via:

Packet radio: N8QLT @ WD8DWO.#semi.mi.us.na
 CompuServe: 70534,227
 Internet: 70534.227@compuserve.com
 Prodigy: BNCG39A

Launch and Landing Operations

NASA Malabar/Palm Bay, FL Nets	(in KHz, USB commonly)
Solid rocket booster recovery	2622 primary, 2764, 3187, 4510, 7765, 11407, 11621
NASA tracking vessels	5180, 5187
ETR range control	2678
ETR primary night channel	5190
ETR secondary night channel	5810
ETR primary day channel	10780
ETR secondary day channel	20390
Launch support ships	5680, 11104, 11252, 18009, 19303
Launch support aircraft	5350, 7676, 9022, 9043, 9132, 13227, 13878
Cape Radio/Leader	4856
Cape radio/Coast Guard Ships	4992
Cape Radio/Launch support A/C	7461
Cape radio	6896, 6837, 11414, 11548, 19640, 23413
S&R Coast Guard primary	3024
S&R Primary recovery zone	4376
S&R Primary Atlantic	6720
S&R comm with Bahamas	7412
Backup mission audio	2664
Navy harbor control	2716
Launch tracking net	7525, 20186
Space missile tactical net	10305
OCC Shuttle mission audio	20198
NASA CB radio channel 9	27065 AM
Data buoys	2405
Data channels	7919, 7985, 13237, 13495

Malabar-Ascencion Island MUX	10310, 13600, 20192
Ascencion Island-Malabar MUX	14937, 19966, 22755
USAF/NASA communications	4510, 4760, 4855, 4992, 5350, 5810, 6727, 6740, 8993, 9315, 9974, 10780, 11104, 11414, 11548, 14615, 19303, 19984, 20191, 20475

Edwards AFB: (frequencies in MHz)

116.4 00	ATIS
120.7 00	control tower
121.8 00	ground control
126.100, 127.800	approach control
133.650	approach/departure control
138.450	commandpost
149.925	security
162.6125	NASA ops
164.1 00	NASA
173.5875	fire
236.6 00	control tower
269.9 00	ATIS
290.3 00	departure control
318.1 00	tower
348.7 00	approach control
372.2 00	dispatchers
390.1 00	ground control

Kennedy Space Center Operations (KHz)

2182, 3023

Kennedy: (MHz)

117.8 00	shuttle control
121.750, 126.300	ground control
126.650	weather
142.500, 143.040	cranes
148.455	NASA booster recovery
148.485	launch countdown/status
148.500, 149.100	Search and Rescue ships
149.175	shuttle crawler
162.000	Search and Rescue ships
162.0125	NASA vessels
162.6125	NASA ops
163.4625, 163.4875	security
163.5125	security
163.5625	fire - primary

164.0 00	radiation checks
164.800	Search and Rescue aircraft
165.1875	check points
170.150	base operations
170.175	transportation
170.350	public relations
170.400	General Services Administration
171.150	maintenance/fuel
171.2625	camera tracking
173.175	security - gates
173.4375	medics
173.5625	fire/rescue
173.6625	safety units
173.6875	security - vans
173.7875	fire - secondary
284.0 00	ground control

Kennedy Space Center Ground Support (MHz)

148.480, 149.170, 162.610, 163.460, 163.480, 163.510, 163.560, 165.190,
170.150, 170.170, 170.350, 171.150, 171.260, 173.560, 173.680

Patrick AFB: (MHz)

118.400	approach/departure control
121.700	ground control
125.100	approach control
126.200	control tower
128.800	dispatcher
138.300	command post
273.500	ATIS
335.800	ground control
340.900	approach/departure control
344.600	weather
348.400	control tower
358.300	approach control
372.200	dispatchers

International emergency air frequencies (MHz)

121.500
243.000

Shuttle frequencies: (MHz)

296.800	primary, air-to-ground or orbiter-to-suit
259.700	air-to-ground or suit-to-orbiter

279.000 suit-to-orbiter or suit-to-suit

Communications and other stuff: S-band (MHz)

2205.000 Air-to-ground
2217.500 Air-to-ground secondary
2287.500 Air-to-ground primary digital downlink
2041.900 Ground-to-air
2201.400 Ground-to-air
1831.800 primary (USAF uplink, phase modulation)
1775.100 secondary
2250.000 wide band FM with main engine analog
telemetry during launch, or TV during orbit
operations.

Note from Ron Parise, WA4SIR, on above S-band frequencies: "The S-band system is one of the primary orbiter downlink bands. The voice channels are digital slope delta modulation and are MUX'ed in with the rest of orbiter telemetry very difficult to copy. Much of the downlink TV is S-band wide band FM and should be easy to copy.

The Ku-band system is used in conjunction with the TDRS satellites, and is used more heavily during Spacelab flight than others. The data rate is very high digital (50 Mbits/sec), and will be nearly impossible for you to demodulate and decommutate in your basement. Nevertheless, the shuttle transmits on 15.003 GHz. These transmission are directed toward the TDRS satellite with a high gain antenna, and cannot be copied from the ground.

The UHF frequencies are fun to listen to, but are not heavily used except during EVA's. You will almost always hear some activity on them during a mission, just be patient."

Ron WA4SIR

Contractors

Rockwell (Edwards)
2995.5, 3282.5, 3475.5, 5597.5, 10010.5, 17966.5 (kHz, USB)
122.800, 123.050, 123.350, 123.525, 462.925 (MHz)

Rockwell (Edwards/Kennedy)
123.475 (MHz)

McDonnell Douglas (Edwards)
123.300, 123.550 (MHz)

Com-Tech Associates (Kennedy)

151.955 (MHz)

IBM & Harris Corp. (Kennedy)
152.480 (MHz)

TWA (Kennedy)
154.515 (MHz)

-END-

End of Ham-Space Digest V94 #46
